

NSLS OHSAS Job Risk Assessment

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Name(s) of Risk Team Members: J. Aloï, B. Chmiel, N. Gmur, R. Heese, I. Pinayev, T. Shaftan, M. Santana, S. Stein	Point Value → Parameter ↓	1	2	3	4	5
Job Title: Conduct accelerator or beam line commissioning and fault studies. Job Number or Job Identifier: LS-JRA-0028	Frequency (B)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Job Description: Accelerators and beam lines are evaluated initially at start-up and following major modifications to ensure that shielding and other safeguards are adequate to prevent exposure to radiation	Severity (injury/ rad event) (C)	First Aid Only/ Rad stop work, RAR*	Medical Treatment/ ORPS threshold exceeded*	Lost Time/ NTS report filed with DOE*	Partial Disability/ DOE enforcement action levied against BNL*	Death or Permanent Disability/ DOE mandated rad ops stand down*
Training and Procedure List (Optional):	Likelihood (D)	Extremely Unlikely	Unlikely	Possible	Probable	Multiple
Approved by: W.R. Casey Date: 7/28/05 Rev. # 1 Revision Log						
Stressors (if applicable, please list all):		Reason for Revision (if applicable):			Comments:	

		Before Controls							After Initial Controls						After Additional Controls					
Job Step / Task	Hazard	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Initial Controls	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Control(s) Added to Reduce Risk	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction

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Job Step / Task	Hazard	Before Controls						Initial Controls	After Initial Controls					Control(s) Added to Reduce Risk	After Additional Controls					
		Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD		# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD		# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction
Radiation levels are evaluated in occupiable areas under various operating conditions	Unexpected radiation exposure resulting from uncontrolled radiation levels	N	3	2	5	4	120	Work planning, pre-job briefing, monitoring, procedures, shielding, interlocks, Beamline review, configuration control	1	2	1	2	4							
Radiation levels are evaluated in occupiable areas under various operating conditions	Injury or fire resulting from equipment malfunction from improper operation during commissioning or fault study. ^A	N	1	3	3	3	27	Work planning, pre-job briefing, operator or tech instruction to ensure understanding of equipment limiting parameters	1	3	3	2	18							
Operation of beam position flags (insertion into the electron beam)	Unusual radiation levels caused by scatter off of the flag.	N	1	5	3	3	45	Surveys, shielding, procedures	1	5	3	2	30							
Operation of disconnects and circuit breakers	Electrocution	N	1	3	5	5	75	Proper grounding, proper equipment design (NRTL approved)	1	3	5	1	15							
	Electrical Shock	N	1	3	3	5	45	Proper grounding, proper equipment design (NRTL approved)	1	3	3	1	9							

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Job Step / Task	Hazard	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Initial Controls	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Control(s) Added to Reduce Risk	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction
	Arc Flash	N	1	3	5	5	75	Training, proper grounding, proper equipment design (NRTL approved), NFPA 70E compliant PPE, standards & procedures	1	3	4	1	12							
Comments: A: Commissioning activities sometimes result in unusual operating parameters which must be evaluated to ensure that components are run within allowable limits.																				
Further Description of Controls Added to Reduce Risk: PAAA requirements regarding radiation controls are subject to rigid enforcement and fines and penalties. It is particularly important in non-routine activities with the potential for unusual exposures (such as commissioning or fault studies) that they be carefully planned and executed.																				
*Risk:	0 to 20 Negligible	21 to 40 Acceptable			41 to 60 Moderate			61 to 80 Substantial			81 or greater Intolerable									